

REMARKS/ARGUMENTSClaim Status

Claims 1-5, 8-11, 14-21, 23, 25, and 27-31 are pending in this application. Claims 1-5, 8-11, 14-21, 23, 25, and 27-31 stand rejected.

Claims 23, 25, and 30-31 have been canceled.

No claims have been amended or added by this paper.

Claim Rejections - 35 U.S.C. § 102

Claims 1-5, 8-11, 14-21, 23, 25, and 27-31 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Vishin et al. (U.S. Pat. No. 5,860,146).

Vishin does not, however, disclose "providing, to an operating system . . . , an interface for the operating system to access . . . the plurality of machine resources using the plurality of physical resource identifiers," as expressly recited by claim 1. Vishin fails to disclose an express element of claim 1. Claim 1, therefore, patentably distinguishes over Vishin.

In general, Vishin discloses a system for "translating virtual addresses into physical addresses" (Abstract). Assume solely for purposes of argument that the "physical resource identifiers" of

claim 1 read on the "virtual addresses" of Vishin, and that the "machine resource identifiers" of claim 1 read on the "physical addresses" of Vishin. As a result, assume solely for purposes of argument that the physical-to-machine mapping recited in step (A) of claim 1 reads on the virtual-to-physical translation disclosed by Vishin.

Even given this assumption, Vishin does not disclose step (B) of claim 1, namely "providing, to an operating system . . . , an interface for the operating system to access . . . the plurality of machine resources using the plurality of physical resource identifiers." The specification of the present application provides examples of step (B). For example, the specification discloses that the memory model 200 of FIG. 2 includes a physical-to-machine translation mechanism 210 for transparently performing a translation between physical addresses in a physical address space 202a and machine addresses 216 in a machine address space 202. (Specification, at p. 16, line 32 - p. 17, line 11). The physical-to-machine translation mechanism 210 is an example of the interface recited in claim 1.

For example, the specification further states that when a process (such as an operation system 324a) executing in partition 322a (FIG. 3) attempts to access a memory location using a physical address in the physical address space 202a, the physical address is

first translated (by the physical-to-machine translation mechanism 210) into a machine (hardware) memory address before the *memory* access occurs. (Specification, at p. 16, line 32 - p. 17, line 11). This is an example of "providing, to an operating system . . ., an interface for the operating system to access . . . the plurality of machine resources using the plurality of physical resource identifiers" (emphasis added), as expressly recited in claim 1. Examples of memory "access" requests include requests to write to memory and requests to read from memory. (See, e.g., p. 24, line 31 - p. 25, line 3).

Vishin, in contrast, does not disclose that the operating system accesses machine resources ("physical" resources in Vishin's terms) by referencing such resources using physical resource identifiers ("virtual" resources in Vishin's terms). Although the Office Action points to col. 5, lines 33-59 of Vishin, this passage merely states that remote translation lookaside buffer (RTLBI) 160 is organized into groups of entries, and that "it is the responsibility of the operating system 180 . . . to make sure that the RTEs in different groups do not have overlapping address ranges." The fact that the operating system 180 manages the organization of the contents of the RTLBI does not indicate or imply that the operating system itself accesses machine resources ("physical" resources in Vishin's terms) using physical resource identifiers ("virtual" resources in Vishin's terms), and Vishin does not disclose any

"interface" that is provided to the operating system for doing so. Vishin does not disclose, for example, that the operating system 180 attempts to read from or write to memory by referencing such memory using virtual addresses, and that an interface translates such references into physical addresses.

In fact, Vishin discloses that *application programs*, not the operating system 160, access memory locations using virtual addresses, which are translated into physical addresses. (See, for example, Vishin at col. 1, lines 39-40; col. 3, lines 47-61).

In summary, Vishin fails to disclose an express element of claim 1, namely, "providing, to an operating system . . . , an interface for the operating system to access . . . the plurality of machine resources using the plurality of physical resource identifiers." Claim 1, therefore, patentably distinguishes over Vishin.

Claims 2-5 and 27 depend from claim 1 and therefore patentably distinguish over Vishin for at least the same reasons.

Claim 8 includes substantially the same relevant limitations as claim 1 and therefore patentably distinguishes over Vishin for at least the same reasons. Claims 9-11 and 28 depend from claim 8 and therefore patentably distinguish over Vishin for at least the same reasons.

Claims 14 and 18 include substantially the same relevant limitations as claim 1 and therefore patentably distinguish over Vishin for at least the same reasons. Claims 15-17, 19-21, and 29 depend from claims 14 and 18, respectively, and therefore patentably distinguish over Vishin for at least the same reasons.

The rejection of claims 23, 25, and 30-31 is moot in light of the cancellation of those claims.

CONCLUSIONS

Any dependent claims not specifically discussed above depend, either directly or indirectly, from the independent claims discussed above and therefore are patentable for at least the same reason(s).

If the Examiner wishes to discuss this Response, the Examiner is requested to call the Applicant's attorney at the phone number listed below.

If this response is not considered timely filed and if a request for extension of time is otherwise absent, applicant hereby requests any extension of time. Please charge any fees or make any credits, to Deposit Account No. 50/1797.

Respectfully submitted,

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